

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application.

Claims 1-15 are pending in the application. Claims 1 and 8 are independent. Claim 1 is amended. No new matter is involved.

Reconsideration of this application, as amended, is respectfully requested.

Drawings

In the Amendment filed on July 29, 2004, Applicants noted their belief that the drawings comply with U.S.P.T.O. requirements, and asked for a form PTO-948, indicating that the drawings have been approved by the Official Draftsperson. Applicants again respectfully request a Form PTO-948 indicating that the drawings comply with USPTO requirements.

Claim Rejections under 35 U.S.C. 102

Claims 1 and 8 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 6,078,365 to Ueda et al. (hereinafter, "Ueda"). This rejection is respectfully traversed.

Claims 1 and 8 recite a combination of steps which are not disclosed by Ueda.

Ueda discloses forming gate electrode G; forming an insulating film 76 made of SiNx over the gate electrode G; forming an a-Si film 77 over insulating film 76; forming an n+ doped a-Si film 78 over a-Si film 77; forming a (first) metal film 79 over the n+ doped a-Si film 78, and forming a resist film 80 over metal film 79. The resulting product is shown in Fig. 15C and described in cols. 12 through 15 of Ueda.

In col. 14, starting in line 11, Ueda discloses that, when the edge surfaces of the respective layers from 78 to 76 are to be tapered the etching can be conducted while leaving the resist film 80. Upper metal film 79 is disclosed as forming address line 63, source electrode S and drain electrode D – see col. 13, lines 18-21.

Ueda's source electrode S is not disclosed as being over the first metal layer, as recited, because Ueda's source S is the first metal layer formed on the second semiconductor layer.

The second metal layer disclosed by Ueda is transparent conductive film 81, which is disclosed as a pixel electrode 61 and overlays source electrode 79.

Clearly, Ueda's source and drain electrodes (made of layer 79) do not overlay themselves or the second metal layer 81.

Accordingly, claims 1 and 8 are not anticipated by Ueda.

Reconsideration and withdrawal of this rejection of claims 1 and 8 is respectfully requested.

Applicants also wish to note that the Amendment filed on July 29, 2004 inadvertently included the language "a second semiconductor active region" in claim 1. The inclusion of "active" in that context was a typographical error because the term "active" was not in any previous versions of claim 1, and was not indicated in the July 29, 2004 Amendment as being a change from the previous version of claim 1. Moreover, there is no proper antecedent basis in claim 1 for the term "active." The terminology, "a second semiconductor active region" has been amended to read -- a second semiconductor region --. Any inconvenience caused in this regard is sincerely regretted.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art (APA) in view of U.S. patent 6,078,365 to Ueda et al. (hereinafter, "Ueda"). This rejection is respectfully traversed.

In the first place, Applicants have not admitted that Figures 1-5 are prior art to them. In Fleming v. Giesa (BdPatApp&Int) 13 USPQ2d 1052 (7/17/1989) it was held that that for an admission to be used against a party, it must be clear, unequivocal and unmistakable. See also, Harner et al. v. Barron et al., 215 USPQ 743 (Comr Pats 1981), Suh v. Hoefle (BdPatApp&Int) 23 USPQ2d 1321 (4/30/1991), Issidorides v. Ley (BdPatApp&Int) 4 USPQ2d 1854 (4/2/1985) and Ex parte The Successor In Interest Of Robert S. McGaughey (BdPatApp&Int) 6 USPQ2d 1334 (3/4/1988).

All that Applicants have done is to refer to Figs. 1-5 as "Conventional" art. Something can be conventional art in the sense that it is practiced in the real world at the time of Applicants' filing of this Application and may yet not be prior art to Applicants in any sense, including, for example, under 35 U.S.C. §103, which forms the basis for this rejection. See, in this regard, the relatively recent amendments to 35 U.S.C. 103(c).

Under the circumstances, i.e., where Applicants merely describe Figs. 1-5 as conventional art, the Office Action has not established that Applicants have made a clear, unequivocal and unmistakable admission on the record that what is disclosed in Figs. 1-5 is prior art to Applicants. In this regard, the Examiner is also advised that the initial burden to establish something as prior art is on the Office as part of its burden of making out a *prima facie* case of unpatentability.

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the applicant to come forward to rebut such a case.

Applicants respectfully submits that the Office has not made out a *prima facie* case of unpatentability at least because it has not made out a *prima facie* case that Figs. 1-5 are prior art to Applicants.

In reply to this argument, the Office Action speculates that inclusion of a discussion of Figs. 1-5 as conventional art in the Background of the Invention portion of the Specification is consistent with the requirement of MPEP §608.01(c)(2) to disclose prior art. The Office Action also references MPEP §707.05(b) which states that MPEP §609 sets forth guidelines for submitting prior art for consideration by the USPTO and speculates even further that Applicants' arguments might be improper.

Applicants respectfully disagree with these rebuttal arguments for the following reasons:

In the first place, MPEP §608.01(c) clearly states that the background of the invention includes paragraphs "describing . . . the state of the prior art or to other information disclosed known to the applicant . . ." (emphasis added). Clearly, this section of the MPEP readily distinguishes between "prior art" and "other information." Accordingly, MPEP §608.01(c) cannot logically be used as a basis for concluding that "conventional art" discussed in the Background of the Invention portion of the specification is prior art just because it is described as such in that portion of the specification. By the express terms of MPEP §608.01(c), "conventional art" disclosed in the background of the invention logically can be "other information," i.e., not prior art.

In the second place, the references to MPEP §707.05(b) and §609, which discuss information disclosure statements, are clearly misplaced. Applicants have

not listed Figs. 1-5 of this Application on an Information Disclosure Statement. Furthermore, MPEP §609 clearly states that “ . . . the filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 CFR 1.56(b). 37 CFR 1.97(h). See MPEP §2129 regarding admissions by Applicant.” MPEP 2129 clearly points out that listing of a reference in an IDS is not taken as an admission that the reference is prior art against the claims. In this regard, also see Abbott Laboratories v. Baxter Pharmaceutical Products Inc., 67 USPQ2d 1191 (CAFC 2003).

MPEP 2129 also points out that only where the specification identifies work done by another as “prior art” is it treated as admitted prior art. In this case, Applicants have neither stated that the “conventional art” is “by another” or that it is “prior art.” Thus, the only basis on which the MPEP permits one to treat art disclosed in the specification as prior art does not apply to the situation present in this Application.

In the third place, Applicants respectfully submit that they have not done anything improper, the possibility of which is alleged on page 13 of the Office Action. Applicants are arguing is that a statement in the specification by Applicants that something is “conventional art” is not, in and of itself, a clear, unmistakable and unequivocal admission that what is “conventional art” is “prior art,” and that the Office Action’s conclusion to the contrary is not supported by

the sections of the MPEP cited to support that contrary conclusion. In fact, under the circumstances, it is only the Office Action's rejection that is improper in the sense that it improperly treats Applicants Figs. 1-5 and its corresponding description, as admitted prior art to Applicants.

Based on the Preliminary Amendment filed on July 29, 2004, independent claim 1 recites a combination of elements in a liquid crystal display device, including "a second semiconductor layer over the first semiconductor layer and having a defined outer edge;

a first metal layer on the second semiconductor active layer and having a defined outer edge, the first metal layer patterned in a same pattern as the second semiconductor layer such that the defined outer edge of the first metal layer is lined up with the defined outer edge of the second semiconductor layer to define a separation region; and

source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer to define a first upper portion of the separation region that abuts the lined up outer edges of the first and second semiconductor layers."

Independent claim 8 recites a combination of steps in a method of forming of a liquid crystal display device, including "forming a second semiconductor layer over the first semiconductor layer and having a defined outer edge;

forming a first metal layer having a defined outer edge over the second semiconductor layer;

patterning the first metal layer and the second semiconductor layer in a same pattern such that the defined outer edge of the first metal layer is lined up with the defined outer edge of the second semiconductor layer to define a separation region." (emphasis added).

Similar features are found in claim 8, per the Amendment filed July 29, 2004.

It is respectfully submitted that the combinations of elements and steps recited in independent claims 1 and 8 are not disclosed or made obvious by the applied art of record including the alleged APA and Ueda et al.

The device claims positively recite structural features which are not found in the alleged admitted prior art or in Ueda. The method claims also recite features that are not disclosed by the alleged admitted prior art or Ueda.

Neither the alleged APA nor Ueda disclose the recited lined up outer edges or abutting (touching) features recited in these claims.

In this regard, Applicants construe "lined up" as disclosed, i.e., in a straight line. In Ueda, the outer defined edges are not in a straight line.

The Office Action does not respond to, or address, this argument.

Accordingly, even if it were proper to modify the alleged APA in view of Ueda, the resulting reference combination would not meet, or render obvious, the claimed invention.

The Office Action dated October 5, 2004 relies on Figs. 15A-15F of Ueda et al. However, an inspection of those figures reveals a structure significantly different from that claimed. For example, Ueda does not disclose "source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer to define a first upper portion of the separation region that abuts the lined up outer edges of the first and second semiconductor layers," as recited in claims 1-7, or "patterning the first metal layer and the second semiconductor layer in a same pattern such that the defined outer edge of the first metal layer is lined up with the defined outer edge of the second semiconductor layer to define a separation region," as recited in claims 8-15.

Because neither reference discloses a number of claimed features, as indicated above, they do not render obvious the invention recited in claims 1-15.

Furthermore, Applicants respectfully submit that the Office Action dated October 5, 2004 does not make out a prima facie case of proper motivation to modify the alleged APA in view of Ueda. In other words, the Office Action fails to provide any objective evidence of proper motivation to modify Figs. 1-5, which have not

been established to be prior art to Applicants, in view of the secondary reference to Ueda.

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the

modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Ueda is directed to preventing peeling of a metal mask (col. 2, lines 30-38). However, the “conventional” art disclosed by Applicants is not disclosed as does not exhibiting that problem. Moreover, just because the references are from the same field of endeavor does not provide proper motivation to modify one in view of the other. A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999). In other words, the broad conclusionary statement that “ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation” to modify the alleged APA in view of Ueda is not clear and particular enough to constitute evidence of proper motivation.

Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness of the claimed invention.

The Office Action treats a number of Applicants' arguments on page 12 thereof. However, the Office Action completely fails to address the following detailed argument presented on pages 11-13 of the Amendment filed July 29, 2004:

Ueda is directed to preventing peeling of a metal mask (col. 2, lines 30-38. However, the "conventional" art disclosed by Applicants is not disclosed as does not exhibiting that problem. Moreover, just because the references are from the same field of endeavor does not provide proper motivation to modify one in view of the other. A showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999). In other words, the broad conclusionary statement that "ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation" to modify the alleged APA in view of Ueda is not clear and particular enough to constitute evidence of proper motivation.

The failure of the outstanding Office Action to treat these arguments clearly violates MPEP §707.07(f) which requires the Office Action to take note of all of Applicants' arguments traversing a rejection and answer the substance of the argument. The outstanding Office Action has not addressed any of these arguments pertaining to lack of proper motivation to combine the references as

suggested. Moreover, this failure to address Applicants' arguments denies Applicants fundamental substantive and procedural due process which the Office is supposed to accord Applicants via the Administrative Procedures Act. See in this regard, In re Zurko, 119 S.Ct. 1816, 50 USPQ2d 1930 (1999), and In re Gartside, 53 USPQ2d 1769 (Fed. Cir. 2000).

As such, this rejection is improper and should be withdrawn, or supplemented, to fully comply with the provisions of MPEP §707.07(f).

The outstanding Office Action also states, on page 7, that a reason to modify the LCD of the APA "with added source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer define first upper portion of the separation region, and the source and drain electrodes include a second and third metal layer in order to use a low resistance metal such as Aluminum for improved conductivity of the circuit components."

Applicants respectfully submit that the Office Action has not established by factual objective evidence that the alleged APA needs to improve the conductivity of its circuit components – the alleged existence of such a need is pure speculation. As is well settled, a rejection based on Section 103 must rest on a factual basis, with the facts being interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, the Examiner has the initial duty of supplying the factual basis for the rejection he advances. He may

not, because he doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis, See, In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Applicants respectfully submit that even a desire to use a low resistance metal for circuit components, which has not been shown to exist in Applicants' Figs. 1-5, does not logically lead to the desire to modify the LCD of the alleged APA "with added source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer define first upper portion of the separation region, and the source and drain electrodes include a second and third metal layer."

Applicants present the following additional rebuttal to the arguments presented on pages 12-15 of the outstanding Office Action.

The "Background of the Invention" section, according to MPEP §608.01 (c)(2), can describe "the related art" that includes not only prior art but also "other information known to the applicant." Nowhere does MPEP §608.01 (c)(2) indicate that the background of the invention section is limited to disclosures of prior art. Applicants' disclosure of Figs. 1-5 as "conventional" is entirely consistent with the guidance found in the aforementioned section of the MPEP because Figs. 1-5 are information known to Applicants that provide a background for someone reading the invention disclosure to understand the invention and its advantages.

Moreover, Applicants clearly stated, in the Amendment filed July 22, 2004, that something can be conventional art in the sense that it is practiced in the real world at the time of Applicants' filing of this Application and may yet not be prior art to Applicants in any sense, including, for example, under 35 U.S.C. §103, which forms the basis for this rejection, referencing in this regard, the relatively recent amendments to 35 U.S.C. §103(c).

The Office Action does not comment on this statement, and does not rebut the substance of the statement, which makes it clear that something can be conventional to Applicants whereas it may not be conventional to others and in no sense may be prior art to Applicants.

Additionally, Applicants respectfully submit that the basis for this rejection is that Figs. 1-5 constitute AAPA, i.e., an admission by Applicants that Figs. 1-5 are prior art to Applicants. Merely referring to Figs. 1-5 as conventional art is definitely not a clear, unmistakable and unequivocal admission that Figs. 1-5 are prior art to Applicants.

Accordingly, the Office Action has not made out a *prima facie* case of Figs. 1-5 constituting prior art to Applicants, or a *prima facie* case of proper motivation to combine the applied references, or a *prima facie* case of obviousness of the claimed invention.

In view of the forgoing, it is respectfully submitted that the applied prior art of record, including the alleged APA and Ueda et al. fail to teach or suggest the

combination of elements and steps set forth in independent claims 1 and 8. It is believed that independent claims 1 and 8 are allowable. Because the remaining claims depend from these allowable independent claims, they are also allowable for at least the above reasons, as well as for the additional limitations provided thereby. Thus, all claims are allowable and reconsideration and withdrawal of the rejection under 35 U.S.C. 103(a) are respectfully requested.

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the Office Action dated October 5, 2004, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert

Application No.: 10/028,305
Art Unit 2883

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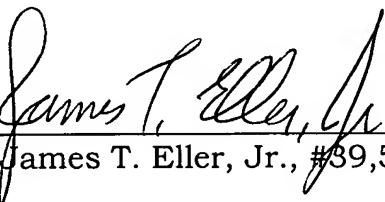
J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.


Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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